The US Dollar US Dollar Shock Cluster State Signal

Why US Dollar Shock Cluster State delivers a 1.65 pp spread on ICE US Dollar Index forward 60-day returns.

David Stendahl · Market Lab Analytics · Nov 09, 2026

What this signal is

Elevated shock cluster state signals coincident spikes across multiple US Dollar Index regime inputs (vol, momentum, EM stress, macro factors) that historically mark crisis-driven dollar movement. Compressed state signals calm regime where dollar movement is noise-dominated.

The composite is bounded between minus one and plus one through tanh. Today the composite reads +0.000 in the Normal band after 110 trading days in the current phase.

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How the inputs compose

Elevated shock cluster state signals coincident spikes across multiple US Dollar Index regime inputs (vol, momentum, EM stress, macro factors) that historically mark crisis-driven dollar movement. Compressed state signals calm regime where dollar movement is noise-dominated. The signal is a composite shock detector combining US dollar vol z-score, momentum z-score, EM FX vol z-score, and macro-stress z-score, bucketed into a shock-cluster state.

What the state-conditional returns have actually done

Computed over 9,227 daily observations. Baseline ICE US Dollar Index forward 60-day return is mean plus 0.09 percent and median plus 0.20 percent.

> **Phase-conditional pattern:** Phase +1 (Shock active, 756 days / 8 percent): minus 0.52 percent fwd60d, edge −0.61 pp. Phase 0 (Normal, 7,917 days / 86 percent): plus 0.08 percent fwd60d, edge −0.01 pp. Phase −1 (Calm, 554 days / 6 percent): plus 1.13 percent fwd60d, edge +1.04 pp.
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> 1.65 pp spread via the multi-factor dollar shock cluster detector channel.

Three cases that frame how to read the signal

Case 1: Shock active, 2020 COVID multi-factor crisis

Shock cluster peaked through March 2020 as COVID triggered simultaneous vol-spike, EM stress, and macro-stress. Signal held Phase +1 territory into Q2 2020 recovery.

Case 2: Shock active, 2008 Lehman crisis

Shock cluster spiked through Q4 2008 as Lehman collapse triggered forced deleveraging. Signal held Phase +1 territory and coincided with dollar safe-haven rally.

Case 3: Calm, 2017 extended low-vol regime

Shock cluster compressed through 2017 as extended low-vol regime held across markets. Signal held Phase –1 calm territory.

How to use the signal today

Composite is currently reading +0.000 in the Normal band.

Pair with companion US Dollar signals listed in the Related section.

Methodology notes

The signal is a composite shock detector combining US dollar vol z-score, momentum z-score, EM FX vol z-score, and macro-stress z-score, bucketed into a shock-cluster state. Target: ICE US Dollar Index front-month continuous.

What this signal does not cover

Three limitations. Multi-factor composite masks which single input drove the firing. Shocks fire late in cycle, so the signal is coincident more than leading. Calm regime can persist for years without edge.

Disclaimer

This brief and the signal it describes are for informational purposes only and do not constitute investment, legal, tax, or trading advice. Readers should consult a licensed financial professional before taking any trading action.

References

ICE US Dollar Index (DXY) futures daily settlement. BIS SDMX policy rate feed. IMF Currency Composition of Official Foreign Exchange Reserves (COFER). US Treasury International Capital System (TIC).

CSI Data Corporation, US Dollar Index front-month continuous (DX21050BD) series.